CAGE
WAYLAND PUBLIC LIBRARY
5 CONCORD RD.
WAYLAND, MASS. 01778
Reference.
vf- Wayland 1973
copy 2 Conservation
WAYLAND PUBLIC LIBRARY

OPEN SPACE STUDY WAYLAND MASS RADCLIFFE SEMINARS 1973

OPEN SPACE STUDY OF WAYLAND, MASS.

THE RADCLIFFE SEMINARS IN LANDSCAPE DESIGN
RADCLIFFE INSTITUTE
CAMBRIDGE, MASSACHUSETTS

OPEN SPACE STUDY

PREPARED BY STUDENTS IN THE RADCLIFFE SEMINARS

Landscape Design II Class

Instructors

Beatrice Pettit
Terry Jacobi
Elizabeth Loutrel

Students

Phyllis Andersen - Lexington
Joyce Bentley - Lincoln
Dorothy Brooks - Weston
Caroline Brown - Norwell
Susan Child - Boston
Louise Fletcher - Harvard
Elizabeth Kline - Cambridge
Lois McAfee - Hanover
Dorothy Minsky - Brockton
Noreen Poitras - Belmont
Ellen Swider - Scituate
Martha Taub - Wayland
Maxine Terner - Cambridge

Study co-ordinated by Martha Taub
Report edited by Phyllis Andersen

The maps compiled by the class and referred to in this report are in the Wayland Town Building.

ACKNOWLEDGMENTS

We would like to thank the following people who gave their time, skills and knowledge in helping our study.

Margot Black, Emily Blair, Grace Bowen, Karen Ela, Barbara Flavin, Devens Hamlen, Marcia Henderson, Bob Kyne, Ed Mendler, Peggy Norwood, Jim Owen, Prenty Richardson, Bobbi Robinson, Polly Russell, Will Ryder, Ginny Steele, Sally Wightman.

A very special thanks to Lew Bowker, Town Engineer, who was most generous with his time and knowledge of the town.

TABLE OF CONTENTS

I. Introduction 1

II. History of Land Use in Wayland 1

III. Description of Wayland 3

IV. The Process of Inventory and Analysis..... 3

V. Inventory of Natural Characteristics..... 4

VI. Scope 4

VII. Water and Wetlands 4

VIII. Soils 5

IX. Vegetation 5

X. Open Space Characteristics 5

XI. Man Made Characteristics 8

XII. Circulation 9

XIII. Trails 10

XIV. Recreation 10

XV. Inventory of Existing and Proposed Protected Lands.. 12

XVI. Developement Capability Map 13

XVII. Conservation Values Map 13

XVIII. Synthesis Map 14

XIX. Recommendations 15

TOWN CENTER PROPOSALS

Wayland Center 19

Cochituate Center 22

I. INTRODUCTION

The Radcliffe Seminars in Landscape and Environmental Design have been developed to prepare students to understand the complex forces that shape the environment and to make intelligent planning and design decisions in the landscape of their gardens and communities. This course, Landscape Design II, directs the students' attention to problems in landscape design on the level of neighborhood and community concern. The course emphasized the analysis of the visual and environmental factors which point to an evaluation of land-use potential. Each year the study relates to a New England community. The town of Wayland was a fortunate choice for it is a challenging community and land-use and future planning have been a major interest in the town. This is evidenced by the work of the Conservation Commission in preparing their Master Plan and the enthusiastic response of the townspeople to the 1972 Planning Board questionnaire, encouraging the Board to formulate a long-range comprehensive land-use policy. The goals for this study were based on the conclusions from this questionnaire, namely that Wayland's residents desire;

1. Retention of open space.
2. Controlled density that does not exceed the potential water supply which can provide for a maximum population of 21,000.
3. A leveled off tax rate.
4. The provision of housing for a variety of incomes and age groups.

The following study selectively focuses on an inventory and analysis of Wayland's physical characteristics and identifies the remaining open space. Our proposal then suggests the optimum use of that space consistent with the town's desired goals.

II. HISTORY OF LAND USE IN WAYLAND

Wayland's terrain is composed of 10,163 acres running North to South along the Sudbury River. Much of the town lies in the Sudbury River watershed. The river is, indeed, the dominant and unifying feature of the town's terrain and played an important role in the history and development of Wayland.

From the early days of settlement of the Sudbury Valley until the 1830's when the town became Wayland, the use of the land was related to farming. The Sudbury flood plain provided pasture and tillable land. The woodlands yielded timber for construction and fuel; streams gave an abundant water supply. Buildings were few, generally limited to dwellings and their related barns and outbuildings. Industry was limited to the needs of a farming community; blacksmith's, grist and saw mills. Public buildings consisted of a meeting house until the 1800's when two churches, a separate meeting house and a library were built. During these years the land was crossed by two highways whose activity kept several taverns thriving.

Many years of land clearing gradually turned the land into the rolling countryside dotted with farms that dominated the rest of the New England scene.

In the 1800's, although the rest of Wayland remained unchanged, Cochituate reflected the industrial revolution. Four story shoe factories sprung up along with large owner's homes, tenements and boarding houses for the workers, and finally horse and electric cars for transportation. In the late 1800's farming decreased in importance as summer residences began to be built in various parts of town. The railroad arrived and with it came the first families who lived in the town but earned their income elsewhere. In Cochituate, when shoe manufacturing almost stopped, many workers remained in the area keeping the appearance of the section quite urban. The congestion of the area increased with the automobile. The proximity of Dudley Pond to urban areas such as Cochituate Center and Natick caused many small summer cottages to be built on its shores, almost totally obscuring the pond and the land. Elsewhere in town, families continued to farm the land and the quiet rural atmosphere slowly attracted residential development.

After World War II, farming declined rapidly and land-use shifted to residences. Plant succession on unfarmed land resulted in many open fields and meadows reverting to woodlands, cutting off many open vistas and views of rivers and streams, but keeping the many new homes from totally shadowing the landscape. After some small lot developments, strict zoning restrictions were passed, keeping new house lots large and industrial areas confined to a few limited locations. The rapidly growing population of the 1950's caused the town to buy and set aside several large tracts of land for schools, water protection wells, a town building and a dump. A number of religious and civic groups also purchased land and built facilities.

As land was increasingly developed, a far-sighted group of citizens formed the Sudbury Valley Trustees in order to preserve some of the land in its natural state. They also encouraged the Federal Government to protect most of the Sudbury River flood plain by establishing the Great Meadows Natural Wildlife Refuge. In addition, the Conservation Commission of Wayland has purchased parcels of land and has developed a Master Plan seeking to insure the purchase or at least protection of considerable land in an undeveloped state.

Open space in Wayland, at present, can be broken down in the following ways. Recreation land is owned both by the town and by private groups and citizens and is used in a variety of ways. There is one military installation. A few tracts of land are planted with silage corn for a local dairy; others are kept open by gardening and pasture. Current trends, however, indicate that this will cease in the near future. Two east - west corridors or "links" are provided by the aqueducts which cross the land; a less attractive one is created by the Massachusetts Turnpike which cuts off the bottom of the town. The

rolling woodlands, and flat plain are further crossed by utility easements, a little-used railroad, several over-crowded secondary highways, many attractive curved residential streets, a few exceptionally striking country roads, and many lovely streams and brooks. Although occasionally marred by buildings and dumps the open flood plain provides a striking contrast to the more developed parts of town.

III. DESCRIPTION OF WAYLAND

Wayland is located in Middlesex County, 18 miles west of Boston and 26 miles east of Worcester. It falls between the two major circumferential highways of the region, Route 128 and Route 495. It is bounded on the north by Lincoln and Concord, the south by Natick, the east by Weston and west by Sudbury and Framingham. It is important to understand Wayland's location in the region because any future development plans should be considered in the context of their regional implications. For example, it might be important to know when planning for development in the northeast section of Wayland that Weston's Town Forest lies along that border or that the Elbanobscot Reservation is in Sudbury along the northwest boundary. Wayland is already cooperating with neighboring communities on some regional issues such as solid waste disposal and transportation and these efforts should be reinforced. Wayland has an area of approximately 15 square miles and is roughly rectangular in shape; its' north - south dimensions greater than its' east - west. Eight miles of the Sudbury River (which flows, uncharacteristically, from south to north) are along the western boundary. The great majority of Wayland's 10,163 acres lie in the Sudbury River watershed, while approximately 132 acres in the southeast corner drain into the Charles River. The eastern section of town is characterised by higher terrain- the highest elevation in Wayland being 406 feet above sea level at Reeves Hill, the lowest elevation occurring in the Sudbury River flood plain. In 1959 Wayland adopted Flood Plain zoning and no building for human habitation may occur below the 124' contour. Approximately 25% of the town is subject to these regulations.

IV. THE PROCESS OF INVENTORY AND ANALYSIS

To determine what land in Wayland was available and most suitable for development we undertook the following.

1. Investigated and took an inventory of the natural and man-made features of the town. This included soils, wetlands, slopes, and vegetation, as well as circulation and recreation facilities.
2. Identified all undeveloped lands of 10 acres or more.
3. Determined either a high, moderate, or low suitability for housing development for these lands. This was determined by overlaying the series of

maps showing natural characteristics (i.e. soil, slope, and wetlands).

4. Determined a high or moderate conservation value for these lands by overlaying maps of vegetation, and terrain-water-view.
5. By mapping the above two categories and overlaying and comparing we created a synthesis map showing general recommendations for development.

V. INVENTORY OF NATURAL CHARACTERISTICS

In dealing with the natural characteristics of Wayland (the terrain, soils, water and vegetation) some important impediments to development were brought to light. However, serious physical impediments in earlier times are now possible to overcome by advanced building technology, but are still considered restrictive because of high construction costs. The natural features dominated the pattern of early development. The first settlers were attracted to the lush meadows along the river. The main settlement had to move away from the river to escape Indian attack, and the river eventually became a political boundary when Wayland separated from Sudbury. The Sudbury River is broad and sluggish, with a slight drop in grade. It flows north, and hence was not an asset as a transportation route. Now much of its flood plain is being conserved by the Federal Government. None of the brooks could supply sufficient water power to invite the Industrial Revolution in any magnitude and thus the town continued its agricultural pattern in areas where soils were suitable, until after World War II when population growth and proximity to metropolitan areas brought about a shift of emphasis from farming to residential community. The maps we compiled enabled us to study particular natural systems and inter-relationships. Graphic displays of the entire town confirm our individual visual observations.

VI. SLOPE

Using the U.S Geological Survey map of the area, we have determined in graphic form the prominent features of the terrain; the river, lake, ponds and streams, valleys, plains and hills, The degree of slope (grade) is a major determinent in such matters as rate of flow of streams or rivers, surface water run-off and drainage, and erosion and deposition of soils. Our "slope" map indicated the degree of slope of the land area of Wayland and the appropriate uses and restrictions for each range of degrees.

VII. WATER AND WETLANDS

We compiled a map indicating the restrictions placed on building in the town because of water. Shown are areas completely closed to construction because of the flood plain and areas restricted to agricultural use only.

Also included are the town wells. Not indicated are direction of flow and drainage, run-off and ground water-studies especially important for large scale construction.

VIII. SOILS

In addition to restrictions obtainable from the slope study we obtained additional information from the U.S. Soils Conservation Service studies of 1923 and 1965. There is no municipal sewerage in Wayland and in our map showing soil characteristics we have identified areas of restriction in the use of septic tanks. Bedrock is indicated and is considered prohibitive in terms of construction. Deep and shallow hardpan are shown and are restrictive, as is steep slope. Building in these areas would require elaborate sewering or larger than normal leeching fields. This is but one aspect of a soil study. It indicates general areas for zoning purposes, and is not detailed for parcels of less than 2 acres. In no case can this study take the place of on site investigation for a specific development.

IX. VEGETATION

Vegetation is the natural characteristic most readily altered by the intervention of man. A map of the distribution of vegetation was prepared using the town's aerial photograph of 1970. It indicates distinctions between visually open agricultural land and the heavily wooded areas - the marshes, swamps and brushy places, which are visually open but probably difficult to traverse are also shown. The areas left blank on this map are already built upon and were not necessary to describe for our purposes. The aerial photograph was done in the summer, therefore it shows maximum vegetation and minimum water levels. It was not possible to separate coniferous from deciduous growth, nor to determine the maturity of the growth. This information would be most useful for detailed conservation studies.

X. OPEN SPACE CHARACTERISTICS

The development of an "Open Space" system in Wayland is essential if the town is to retain its character and provide the maximum number of posibilities for its people to appreciate their land, both visually and as a recreational resource. The establishment of an "Open Space" system will provide guidelines for future population growth and development. The System will also prevent the destruction of the ecological balance as it exists today, indeed,it may

hopefully improve it. Such a system must be developed considering two prime factors - one, its relation to the natural features of the area, and two, its relation to the people; how they view it and use it. What is the ecological character of Wayland? How do we describe it in terms of its natural features? The river is the dominent and unifying feature of the terrain, providing it with a number of invaluable assets - "a maximum number of overlay benefits," as the ecologists call it. The river and its flood plain offer spectacular visual amenities, a natural system of linkage, opportunities for recreation, a drainage network for flood control, and vast capabilities for water conservation. The eastern side of the town is characterized by a network of high terrain, providing from its many ridges both short and long ranging views across the flood plain and river to the mountains beyond. This variety of terrain interlaced with extensive networks of streams and ponds, are covered with a rich variety of vegetation providing visual diversity and interest, and offering natural privacy and protection from development. From this ecological portrait of Wayland a "natural" open space system emerges which follows the dictates of water and terrain. How does this system relate to the people of Wayland? Is it visually accessible to them? Is the space usable for the optimum number of residents? With these questions in mind we shall try to decide which lands are to be conserved, which are to be restrained from future development, and which are to be used for active recreation. Open space as viewed from the roads carries a high priority because it is seen by the greatest number of people. Thus "linear strips" can become the most efficient form of open space, providing the most effective kind of acreage and a serial experience of visual beauty. These strips also serve as natural corridors, as links within a total system. Thus open spaces containing natural assets such as high terrain or stream networks become more valuable, and carry a high priority if they are visible from the road or directly along it. According to this system of values certain man-made features of the landscape also carry a high priority, such as farmland, early houses, and stonewalls. These features which give character and identity to "rural" and "historic" Wayland lie primarily along its roads, and must at all costs be preserved and integrated within the over-all open space system. Many devices may be used such as conservation, historic preservation, and the designation of scenic roads. Conversely, wherever disturbing obstruction to visual amenities exist along the roads, action should be taken to remove them. The most obvious example of such obstruction are the web of electric wires and poles in Wayland Center which almost destroys its aesthetic qualities. Wherever public lands, such as aqueducts, touch the roads, efforts should be made to increase their scenic value by good maintenance, and judicious planting or pruning. Wherever future housing development takes place on land adjacent to the roads, buffers of trees should be planted to minimize the encroachment of buildings into open spaces.

Wherever possible new links, trails, rights of way, or roads should be created to make Wayland's natural assets accessible to the people - particularly the Sudbury River which is neither seen nor used to its maximum extent.

Finally wherever the ecological balance is threatened by development, open space must be preserved by legal means. To propose a viable open space program for Wayland we must analyze, according to certain criteria, each remaining large parcel of land still in private hands, and make a judgement as to open space/conservation value. The criteria we have established for high conservation value are properties that have all the following characteristics:

1. The quality and variety of the terrain, both within the limits of the property and how that property relates to adjacent parcels of open space.
2. The presence of water - the river, ponds and stream networks.
3. The variety and quality of vegetation, including the variety of wooded and open - land, both within the particular parcel and as it relates to other parcels of open space, attaching always an especially high priority to farmland.
4. The roadside scenic value that these properties provide along their perimeters.
5. The general geographic distribution or locational value of properties in terms of:
   a. each other
   b. other conservation lands
   c. constructing a strong open space linkage system

The properties which have only one or two natural features that can be considered as assets have been assigned moderate value with the open space system. In addition, the properties of moderate conservation value might simply:

1. Provide access to a natural resource (i.e. water)
2. Provide an open tract of land in an otherwise densely populated area
3. Have a crucial location along a town boundary.

After examining the following parcels, we have assigned them appropriate values. These assigned values and the geographic relationships of the parcel can best be seen on our "Map of Conservation Values".

Mainstone - High sites, varied terrain, forested and cultivated land, pond and stream networks; large property in geographically desirable part of town, great length of property along road offering scenic value.
Pratt - Adjacent to Mainstone (extending its perimeters), cultivated lands, roadside scenic value at crossroads.
Watertown Dairy - Large parcel varies between cultivated land and flood plain stretching to the Sudbury River along an extended shoreline, invaluable roadside scenic value.
Lincoln Road, Hazelbrook area - Variety of terrain, cultivated fields, generally open sloping land with higher forested

land in the distance, ponds and streams, stonewalls delineating fields, great roadside scenic value, adjacent to other conservation lands.
Lower Millbrook - Brook (long and meandering), ponds, wetlands, edged by steep forested ridges, scenic views from roads, close to center of town, contiguous conservation and public properties.
Lord and Vacaro - Direct access to and view of the Sudbury River, relatively high site (160') , well forested above wetlands, contiguous with other conservation and public lands, scenic value from Old Sudbury Road, River Road, and Water Road, and potentially from the State Road; located in extreme ~~eastern~~ middle section of town.
Trout Brook Area - Stream network, variety of terrain (both wetlands, cultivated land and high 190' ridges), scenic views from Oxbow Road (near corner of Concord Road) along valley across River to Mount Wachusett, contiguous with other conservation properties; located in northern most section of town.
Lombard - Relatively high site (190') in flood plain with direct access to and view of Sudbury River, contiguous with other conservation lands; located in the southwest section of town.
Wayland Golf Club- Located next to Watertown Dairy, all lowland adjacent to flood plain with extensive view of river, land contains large pond (Baldwins), and is contiguous with other conservation land.
Sandy Burr Golf Club - Varied terrain extending from ridge directly down to Sudbury River providing excellent views from the road, located very close to the center of town, contiguous with other large conservation lands.
Paine - Varied terrain, extending from ridge through cultivated fields and forested land down to the Sudbury River, located adjacent to Sandy Burr Golf Club, near the center of town, contiguous with other large conservation lands.

XI. MAN-MADE CHARACTERISTICS

Land Use

We compiled a land use map using the town zoning map and several previous land-use studies. It was done to determine the balance and distribution of acreage between conserved space, cultivated land, residential, commercial, industrial, and recreational acreages.
Of the 10,163 acres in Wayland -
36% (3,619) are developed for residences
1% (147) is developed for business, commercial and industrial uses
3% is still farmed
31% (3,151) is public land, that is owned by the Federal (16%), State (3%), or Town (12%) governments
2% (185) is owned by the Sudbury Valley Trustees
2% (236) is covered by Great Ponds

XII. CIRCULATION

TRANSPORTATION

The people of Wayland rely almost entirely on automobiles for transportation. Minimal bus service from the town center offers the only alternative for transport into Boston. It has been estimated that 1 out of 5 Waylanders commute to jobs in Boston and 88% of that number drive into the city alone. It would seem that some form of mass transit would serve the town to advantage and also eliminate the congestion and resultant pollution on roads leading into the city. Several inter-town committees have been formed to study common transportation problems, among them the Suburban Intertown Liason Committee (S.I.L.C.) and the Bi-Centennial Transportation Committee. Polly Russell, long involved in Wayland's transportation problems, has suggested that the tyranny of highway funding may be broken by one or a combination of the following; Clean Air Standards (if enforced), gas prices and the Governor's Mass Transit Plan. The M.B.T.A. is now negotiating for the purchase of the Boston and Maine Railroad tracks and accompanying land which runs through the center of the town, with a main station just NW of the town center - this seems a first step in the implementation of a new system of rail service. Conveniently containing major E-W and N-S roads, Wayland attracts a major share of through traffic. U.S. 20, which runs through the center of town, is a highly used and congested road carrying a high volume of through truck traffic. Unfortunately a proposed U.S. 20 by-pass, which would have preserved the small town character of Wayland Center, was not expedited when proposed some years ago, with the result that the Center is congested, fragmented and dominated by the automobile. (Wayland need only look to neighboring Weston to see the success of a town center by-pass). Any further through highway development (such as the once proposed mini-circumferential running N-S through the town) should be discouraged as it would destroy the remainder of the rural landscape. De-numbering Routes 126 and 27, limiting through truck traffic in addition to working for regional mass transit will alleviate the major transportation problems.

The Sidewalk Committee, recently formed and with limited funds, is attempting to gauge town opinion on the desirability of sidewalks. Calling them footpaths to allow bicyclists to legally use them, the Committee is now joining up older sidewalks to form major loops around populated areas. A master plan of sidewalks/ footpaths to link open space and recreation areas, as well as provide a safe route to school properties, would be desirable.

Our "Circulation" map locates major roads, the railroad, existing sidewalks, aqueduct paths, easements and major trails.

XIII. TRAILS

At the beginning of our study we set out to locate all major trails - both public and private, that were used for nature walks, bridle paths, biking and cross-country skiing. We went on to consider all the available easements and rights-of-way which could have been used as links. We had the help of many sources;

1. The trail booklet published by the Conservation Commission.
2. The town zoning map.
3. Meetingsand a field trip with Will Ryder.
4. Consultations with Jim Owens-a Wayland resident who is an active cross country skier.

In considering the importance of trails we came upon an interesting statistic; in 1960 the Outdoor Recreation Resources Review Commission found pleasure driving the most popular outdoor recreation activity. In 1970 they found that hiking, biking and horseback riding surpassed driving by better than 2 to 1.

We realized early in our study that there were many small, unmapped trails within Wayland that could serve as vital links. Although it was not feasible because of time limitations for this mapping to be completed, we believe it to be an important study for the town and strongly recommend it be implemented. Trails of surrounding communities should also be considered as linkage.

XIV. RECREATION

Recreation facilities in the town of Wayland were surveyed to determine whether existing facilities met current needs. An inventory of the recreational facilities of the town reveals an abundance of resources for people of all ages and inclinations. This is the time for the town to take a comprehensive view and fill in the few gaps in what is, in fact, the beginning of an excellent network of recreational facilities. The following discussion indicates the results of research and observation over a limited period of time, rather than a rigid recommendation of what is to be done. It is a series of proposals for future studies to determine how this recreation network may be enhanced and how these facilities may be made available to the entire town.

Ideally, recreation facilities for children should provide generally accepted ratios of space to number of children and appropriate equipment for the various age groups. But this is not the sole criteria determining successful usage. On site observation of the school yards reveals that the playground of the Cochituate School is in constant and heavy use, disproportionate to that of the other school yard. It would seem on first observation that this playground would be too small and its location too close to commercial areas and heavy

automobile traffic to be recommended as a successful play site. However, its proximity to some high density housing and its accessibility from all directions tends to outweigh the more formal criteria. There is, also, the safety factor of visibility, since the playground is bounded on three sides by roads, which allows informal policing from the street and by the neighbors. This area is not only heavily used, but it is used simultaneously by many age groups from pre-schoolers to young men playing ball after work. The reasons for the success of the Cochituate playground should be investigated and considered when doing further studies to establish play areas for the future.

Although Wayland exudes a rural atmosphere, it is fortunate to be large enough to provide a suburban concept of organized activities for its young people. The underlying philosophy represented here is that play facilities should be located close enough to the children's homes that they can get there independently.

An analysis by age group is most useful.

1. The pre-school child of Wayland seems well served by his own back yard.
2. The young elementary school child is served primarily by the playgrounds of his neighborhood elementary school. Geographically, there are two medium to high density neighborhoods whose children do not have an area sufficiently close to them. While the children in the southern and eastern sections of Wayland have schools close to them, the children in the areas north of Route 20 and west of Concord Road must cross the dangerous barrier of Concord Road to travel the great distance to their nearest school, Claypit. Developing the school site on Orchard Lane and more fully developing the school site on Alpine Street would give the elementary school children of these sections a playground within a mile of their homes.
3. The junior high school age group needs more sports facilities available to them. The old and new junior high schools should be able to provide the necessary space and equipment for these youngsters. It seems very important to consider the old junior high school as a center for young people. Even though the site is limited, this facility seems to have many of the advantages of the Cochituate School playground in terms of central location and accessibility. Presumably a good indoor gymnasium could be available here.
4. The senior high school with its large fields, tennis courts, and field house logically should serve the needs of young adult and adult population.

The suggestion for developing the Orchard Lane and Alpine Street sites is aimed at providing local play areas for children from approximately six through eight or ten years. The use of the elementary, junior high, and senior high sites depends on the accessibility of these areas to

children from all over Wayland. Footpaths that can be used by bicycles to provided safe links to the recreation sites is of the utmost importance, and it cannot be stressed strongly enough that circulation is the key to making recreation facilities available to the population of Wayland. As seen on the Circulation map, there are some paths on Routes 20,30, and 126 as well as those leading to the Loker and Happy Hollow Schools. North - South linkage would open up all the facilities to all the children of the town.

Our Recreation Resource map revealed graphically what direct observation pointed out. After mapping all existing private and public recreation areas, and overlaying this on our circulation map, it was revealed that the town was served in differing degrees. Residents north of the Claypit School are cut off from public active recreation sites.

In the area of unstructured recreation an active and thoughtful Conservation Commission has established a plan to provide areas in all parts of the town for those who enjoy the natural beauty and history of Wayland. Again, the question of linkage to provide ease of movement from one area to the other is important. The town provides lake and pond swimming, boating, ice skating and fishing. Together these resources preserve the rural atmosphere and provide resources for the private individual. There is also considerable support for special interests such as tennis and horseback riding provided for by private facilities. The Sudbury River is an area for both conservation and active recreation. There are several launching sites along the river for canoes and small boats which are shown on a map in the "Trails" Booklet. Multiplicity of sites is desirable to avoid traffic congestion, to allow several places to park, and to make the river available along its entire eight miles of border. The town now has land at Route 20 near Raytheon which could also provide parking. At one of these sites the town should provide canoes for hire to make the river available to more of its citizens. It is suggested that Wayland explore the possibilities of co-operation with Sudubry to provide sites on both sides of the river for canoeists to embark and disembark, picnic and the like as they moved along the river.

XV. INVENTORY OF EXISTING AND PROPOSED PROTECTED LANDS

By drawing on several sources namely, the town zoning map, the Conservation Master Plan, the U.S. Fish and Wildlife Master Plan, and the Conservation Maps of Sudbury, Lincoln and Weston, we produced a map locating all land already preserved in order to determine gaps in the location of open space.

XVI. DEVELOPMENT CAPABILITY MAP

From the town zoning map we created a base map showing the larger privately owned parcels of land, including contiguous properties which might possibly be assembled into large units. It was difficult to set up exact standards and a certain amount of subjectivity necessarily entered into the selection. Comparing this base with the previous maps showing the restrictions on septic tank sewage disposal systems enabled us to make an overlay showing the land most suitable for development, that which is less suitable, and that where building is prohibited or should be severely restricted. It must be emphasized again that this map is an indication of general areas only, and detailed observations at the actual site are necessary to determine where building may be permitted. The areas which showed up as white when the two maps were combined are indicated on the overlay with large dots. These are the locations with no more than moderate limitations on building and are considered the most suitable for development.

The areas covered with small dots are those over deep or shallow hardpan where percolation could be difficult and might necessitate a larger area for each dwelling unit or expensive site preparation. The solid gray areas on the map shows the land least suitable for development, including the flood plain and watershed protection zones where building is prohibited. One or two large areas such as the Wayland Country Club which are entirely in the flood plain zone were not considered. The poorly drained land is also put in this category because of the danger of pollution and because it would probably not meet the Board of Health specifications. Areas of bedrock close to the surface and steep slopes of over 15% also fall with this classification. The difficulties of putting disposal systems on bedrock would probably make their development uneconomical, and building on the slopes could cause erosion problems. This map deals with physical characteristics only, and the fact that an area can be built on does not mean that it should be. Other factors must be considered before any proposals can be considered as to the best use of a piece of land, and this acetate overlay will help to indicate conflicts.

XVII. CONSERVATION VALUES MAP

We analyzed the remaining large parcels of land in terms of their intrinsic conservation values. The resulting map was not compiled to indicate which land should be acquired as "conservation lands" but it was meant to compliment and reinforce the Master Plan presented by the Conservation Commission. We then established a set of criteria to assign high or moderate conservation value to each parcel. It was established that each criteria carried equal weight. The map becomes most important when seen in conjunction with the Development Suitability map and in combination with the latter resulted in our Synthesis map to be discussed later in this report. Parcels assigned high conservation value exhibited

all of the following;

1. Unusual features or variety of terrain.
2. Presence of water; river, ponds, streams within the property, or if it provides access or views of same.
3. Quality and variety of vegetation - wooded areas, wetland shrubs, cultivated land, golf courses.
4. Roadside scenic value.
5. Geographic distribution or location of properties in terms of their relationship to each other, to other conservation lands, both local and regional and to a strong open space linkage system.

Parcels assigned moderate conservation value exhibited only one or two of the above attributes. In addition, the property might provide access to a natural resource, or to an open tract of land in an otherwise densely populated area. It might also have a crucial location along a town boundary. Roads with valuable scenic views are also indicated on this map. The future of these large remaining parcels must be determined in the near future if Wayland is to retain its rural character. We are not proposing that each property with a high conservation value be acquired by the town or considered in its entirety. We are only assigning conservation values to these properties according to their intrinsic natural resources. In overlaying the Conservation Values acetate map and the Development Suitability acetate those lands which are most suitable for conservation purposes were revealed. From this overlay we drew up a Synthesis map which showed that certain properties have a high suitability for both housing and conservation. By laying the Development Suitability map over both the Conservation Values and Open Space maps, one can determine where on a particular property open space for public enjoyment should be conserved.

XVIII. SYNTHESIS MAP

We arrived at our Synthesis map by comparing the data from both the Development Suitability and Conservation Values maps. Three types of general guidelines were established.

1. Where high suitability for development was coupled with moderate conservation value, the land was judged suitable for a wide variety of housing development.
2. Where the overlay indicated a conflict between high suitability for housing development and high conservation value, the land was judged suitable for concentrated development, such as clustered single-family units, town houses, or apartments, in order to retain a maximum amount of open space.
3. Where the overlay showed low suitability for housing but high or moderate conservation value, the land was deemed suitable for retention as open space.

This map describes visually the most suitable uses, in our opinion, for the remaining undeveloped land

in Wayland according to those specific criteria mentioned in the sections on development suitability and conservation values. This does not mean, however, that each parcel should be developed strictly according to its suitability. Rather, it means that if Wayland decides to permit certain types of housing or decides to preserve open space then these are the most appropriate sites. Another synthesis using different inventory maps can further refine land uses. For example, if the town feels that it is important to preserve all agricultural land or golf courses, regardless of development suitability then that value takes precedence and the land should remain as is. Or, using the Conservation Master Plan as an overlay on our Synthesis map it can be determined which of those lands are most threatened because of their high development suitability. Furthermore, a recreation suitability map can be formed by analysing and combining the Recreation map, the Circulation map, the Future Development map and the Vegetation map. This composite map would then show where recreation facilities were lacking, which lands were already town owned, which lands had high linkage value, which lands were most accessible via trails or footpaths and not cut off by major lands, and which lands because of their topography and vegetation are most suitable for various kinds of recreation. The recreation suitability map could then be used with our Synthesis map to further refine the housing or conservation suitability of a given parcel. Given two pieces of property, both highly suitable for housing and conservation, but one having the additional value of high recreation suitability; that property, therefore, becomes less suitable for housing and its open space value increases. This becomes clear in the case of Sandy Burr Golf Course and the property below it. They both have the same suitability according to our Synthesis map, but it is clear that Sandy Burr because of its added high recreational value is more critical to preserve. The importance of this analysis lies in its flexibility as a process for determining the suitability of individual parcels of land for a variety of uses. This process can be used to guide planning for Wayland's future development.

XIX. RECOMMENDATIONS

In the long run, the zoning regulations should be revised to reflect not only density, but also the factors that indicate how housing development will qualitatively and quantitatively affect Wayland.

Until such revisions can be made, we recommend that Wayland require developers to submit an environmental impact statement for every development proposed. Such a statement would ensure that future housing be of high quality and in accord with the town's goals.

1. To achieve the goal of RETAINING OPEN SPACE the statement should include the location of areas

which have unique ecological value, and a description demonstrating how construction will not harm or destroy these areas.

2. To achieve the goal of CONTROLLING POPULATION GROWTH, the statement should include an estimate of solid waste disposal, drainage and water needs and how they will be provided, as well as the development's impact on schools and traffic.
3. To achieve the goal of HOUSING VARIETY the statement should include a description of proposed housing types and reasons for their locations.
4. To achieve the goal of LEVELLING OFF THE TAX RATE the statement should include the cost of services which the town will have to provide to accomodate the needs of additional residents and an assessment of the tax revenues accrued from the proposed development.

We propose that a full-time town planner be hired to help the townspeople evaluate the validity and the thoroughness of such environmental impact statements and to conduct coordinated and comprehensive studies. Some of the studies which the town should undertake to help the planner evaluate future development proposals include;

1. Drainage study
2. Solid waste disposal study in conjunction with the efforts of the Regional Refuse Disposal Committee.
3. Documentation of historic agricultural and industrial areas to augment the Historical Commission's study of early homes.
4. Study to determine which areas should be zoned multi-family in accordance with the new zoning by-law currently being written.
5. Study of legal mechanisms such as easements, covenants, land trusts to determine which may apply to Wayland's needs.
6. An air photo analysis of the town taken during the winter at a more detailed scale.
7. Study to determine existing capacity of services, potential capacity and cost of expansion.

At present, however, there are many specific proposals which the town can implement immediately. We recommend;

1. That regulations be instituted to require landscaping for all developments, both private and commercial. Landscape designs would be subject to the approval of a Town Design Review Board.
2. That wherever future housing takes place on land adjacent to roads, buffers of trees and shrubs be maintained or planted to minimize the encroachment of buildings on to the remaining open spaces and to maximize the scenic beauty.
3. That prime agricultural land be protected and encouraged to remain under cultivation by every legal device possible. Cultivated farmland sets a rural tone and provides the town with many tracts

of open space and roadside scenic attractiveness.

4. That scenic roads be designated to preserve roadside amenities such as stone walls.
5. That public land along the roads, such as the aqueducts, be well maintained.
6. That judicious cutting of specific trees and shrubs be carried out to open up the views to Mill Brook, Sudbury River, Heard's Pond, and Baldwin's Pond.
7. That the Town Building site be landscaped to create an attractive approach to the town center.
8. That the commercial signs used in the center be unified.
9. That a small committee be set up for the purpose locating all trails, public and private, and for mapping these trails.
10. That in areas where vital links lie across private land, the town should approach the owners with the purpose of obtaining easement rights.
11. That proper usage of trails be ensured by a set of symbols indicating the uses on each trail.
12. That standards of maintenance for links and trails should be established. As the network of trails expands,it will no longer be possible to keep the land open and usable by maintaining it on a volunteer basis.
13. Those links in the foot/bike path system which connect residents of the north and northwest with the Town Center should receive high priority. Suggested links are:
Sidewalks should be completed from the Town Center north, south and west. Southern paths to be completed are Cochituate Road to Cochituate Center and the Old Connecticut Path from Cochituate Road to Senior High School. To avoid the intersection of Route 126 and Old Connecticut Path, that portion of the sidewalk should be on the north side of Old Connecticut Path and the west side of Cochituate Road. This would complete vital links from the Town Center into the southern part of Wayland with connections to the schools, Dudley Pond, Cochituate Center, and Lake Cochituate. It would also connect to the Weston aqueduct to provide linkage parallel to the other section of Old Connecticut Path from the east. Extension of Route 126 north from Claypit Hill Road to Sherman Bridge Road with a crossing point for the children of the Moore Road section and a sidewalk on Sherman Bridge Road west from Route 126 to Oxbow Road would provide the link for those living in the north of Wayland.
14. That ponds should be stocked with the help of the Massachusetts Department of Fisheries and Hatcheries, to provide fishing for town residents.
15. The Alpine Street School site and the Orchard Lane school site should be fully developed for playground use. Before developing playground areas, some attention should be paid to what factors make the Cochituate playground the most heavily used.
16. That an access should be determined for the Pelham Island and Heard's Pond area.

17. The Sudbury River is presently under utilized. Several launching sites should be established in addition to the newly acquired site on Route 20.

The following are studies which a complete plan would require.

1. Economic - a cost/benefit analysis to determine the trade-offs of constructing particular housing types versus the services which the town will have to provide to accomodate the needs of the additional residents.
2. Social - a study to determine the needs of the residents.
3. Ecological - study of particular sites to ensure that any land high or unique ecological value is preserved. For example, there may be certain species of plant life or animals which might be destroyed or harmed by development.
4. Historical Growth - Demographic planning study to determine (given the existing and projected growth patterns) the optimum numbers of people who can live in Wayland without compromising the high quality standard of living.
5. Physical - a solid waste disposal study; a drainage study to determine water run-off locations and amounts.
6. Town Traffic - a study on major roads and roads adjoining other towns.

These studies will enable the town to prepare a comprehensive land use policy statements and objectives. To implement the land use policy, the town then prepares a Comprehensive Development Ordinance based on applicable state and federal environmental regulations. The town should also prepare uniform subdivision regulations with respect to environmental quality. The preceding is required if rational planning decisions are to be made about the disposition of large tracts of undeveloped land. In order to conduct co-ordinated and comprehensive studies, we recommend that a town planner be hired.

The town of Wayland has an important decision to make. If no further studies are carried out and if development is allowed to occur without strict planning guidelines then the town's few remaining undeveloped lands will become dotted with houses. The rural character of Wayland will disappear.

WAYLAND CENTER

The redesign of Wayland Center is a high priority according to the Planning Board. The need for such improvement was clearly expressed by numerous residents responding to the Planning Board's questionnaire. Their dissatisfaction ranged from its visual and aesthetic appearance to the lack of shops and services. The potential for redevelopment of Wayland Center into a Town Center is great because it is the physical confluence of many of the town's assets and existing services.

1. It is the geographical center of the town situated at the juncture of the main East-West and North-South roads.
2. It is the administrative center because of the location of the Town Offices, the Main Library, and a Post Office.
3. It is the historic center. The Wayland Historical Society is located in Heard's House. The Center has been designated a historic district by the Society. The First Parish Unitarian Church and Collins Market (which was the town hall in the 1840's) are part of the Center.
4. It is the transportation center as is indicated by the intersection of the main E-W (Route 20) and N-S (Routes 126 + 27) vehicular roads and the presence of the railroad tracks and station. If and when commuter rail service is reinstituted to Boston, Worcester, and Route 128, the Town Center will become an even more major transit node.

In addition, two other major town activities exist in or near the Center although presently underdeveloped or under utilized.

1. Commercial activities at the Center are now limited but can be greatly expanded and improved.
2. The major recreational assets of Wayland are easily accessible from the Center; e.g. the golf courses, the Sudbury River, Heard's Pond, the U.S. National Wildlife Refuge, and the Mill Pond Skating area.

Our proposed Town Center design has some unique advantages that serve the entire town and will, in fact, strengthen and reinforce the unification of the entire community.

HISTORICAL AND EDUCATIONAL ASPECTS

The Town Center area has been designated a historic district by the Wayland Historical Society. This district includes the Main Library, the Railroad Station, Heard's House, Collins Market (which was the first town hall), and the First Parish Unitarian Church (which was constructed in 1815).

Mill Brook runs directly through the center of Wayland on its way to the Sudbury River, although at present its existence is barely noticed. Water is an important determinant of the character of Wayland since much of the town's growth was influenced by the river and its watershed. Emphasizing the presence of this brook would establish a link to the past, by focusing on the importance of water in Wayland's development. In addition the scale and character of a small millstream would recapture some of the waning scenic values of the Center

It is recommended that the Town;

1. Create a historic tour which can be given to people to follow on foot or in a car. Route 27 (Old Sudbury Road) could be designated a scenic road in accordance with the recent state law and thus have its rural character protected.
2. Establish an information center and a by-pass behind behind the Town Building.
3. Redesign the multitude of signs in the Center area perhaps encouraging the use of "period" signs. For example, hand-carved wooden signs are being used successfully throughout Scituate and Cohasset.
4. Redesign and re-emphasize the road crossings of the railroad and Mill Brook.
5. Eliminate utility wires, poles and clutter; redesign and relocate traffic signals.
6. Change location of bus stop.
7. Establish pedestrian paths on both sides of main roads and widen those that already exist.

COMMERCIAL ASPECTS

The commercial area has been allowed to develop haphazardly resulting in a proliferation of signs and gas stations. The existing shops, according to the residents who responded to the Planning Board questionnaire, do not offer sufficient variety to meet their needs. Many people apparently shop in neighboring towns rather than the Wayland Center commercial area. Some of the additional facilities requested include a movie theatre, book store, art gallery, teen-age hang-out, and an ice-cream parlor. It is noted that there are several large, undeveloped parcels of land within one mile of the Center that could be developed for housing, either single or multi-family. If developed, there would be an even greater need for additional commercial facilities. It is proposed, therefore, that the large triangular area bounded by Route 20, the railroad tracks, and Cochituate Road be redesigned as an inward-facing pedestrian mall. This is imperative to alleviate the noise, congestion, pollution and hazards of the heavy traffic along Route 20. Large areas would be designed at either end of the mall to provide sufficient and easily accessible parking and to control automobile access onto Route 20. Many of the existing stores already have back doors which can be converted into main entrances. A few of the non-conforming or particularly unattractive establishments might be relocated (with support of the Town) to more suitable locations. For example, the large parcel owned by Ford visually obstructs the Center's major scenic amenities -Mill Brook and the wooded area adjacent to the Old Jr. High School. Additional planting at the traffic island and in front of the Town Building would provide visual and sound buffers to Route 20 and create an attractive setting for the Mall. In addition, the linear character of Wayland facilitates alternative forms of transportation within the Town. For example, Dial-a-bus or jitneys would be economically feasible if there are enough people who want to go to the Mall. These transportation services would further unite the town.

RECREATION/CULTURAL ASPECTS

Many recreational activities exist in or near Wayland's Town Center; skating on Mill Pond, golfing at Sandy Burr and Wayland Golf Courses, hiking along trails in Pine Brook, lower Mill Brook, and hiking, boating and bird-watching at Pelham Island and Heard's Pond. In addition, there is easy and direct access to the Sudbury River and to the Old Junior High School with its adjacent fields although these close connections are not presently emphasized or utilized. According to the results of the Planning Board questionnaire, existing recreational facilities should be augmented by additional facilities and activities for teenagers and families. It is proposed, therefore, that the building become an innovative, active, round the clock multi-purpose center. For example, during the school day there could be day-care, adult education, and arts and crafts activities; after school there could be arts and crafts, conservation and ecology programs, and athletic activities; in the evening the building could become a teen center with the teenagers responsible for programming. They can take advantage of the existing auditorium and cafeteria to run a film series, a coffee-house and/or special classes and seminars. The large amount of land surrounding the building could be redesigned to improve the playing fields and the parking lot.

In order to encourage compatible uses of the Sudbury River, a boating concession could be established - either town sponsored or leased to a private concessionaire - to provide canoes and/or paddle boats.

SUMMARY

Before some of these recommendations can be translated into an over-all design several studies are necessary.

1. An association like a Chamber of Commerce should be established to represent the interests of the commercial establishments.
2. An implementation study to detail alternative mechanisms for enacting the recommendation. For example, should the Town Center scheme be contracted to a developer with design review by the townspeople, or should a corporation be formed to coordinate the planning and designing ?

Other specific small-scale recommendations can be implemented immediately, such as plantings on the Town Building property, on the islands, and behind the Shopping Center. Relocating overhead wires could be investigated. These projects could all be coordinated with the Bi-centennial celebrations.

COCHITUATE CENTER

Wayland has two town centers. For future planning, the center located on the Boston Post Road (U.S. 20) should be considered for civic, cultural, and commercial growth. Cochituate Center, on the other hand, springing to life during the nineteenth century manufacturing boom in the town, responds to the commercial needs of this highly populated area. It should be protected from both uncontrolled growth and total isolation. Cochituate Center is situated between the junction of East and West Plain Streets and Commonwealth Road (Rte. 30). Town services in that area include a second Wayland fire station and a branch of the Wayland Public Library. There are several playgrounds in the area and Dudley Pond and Lake Cochituate are nearby.

ASSETS

1. Manufacturing firms have not intruded large-scale buildings into Cochituate Center, and, indeed, the community benefits from a continuity of scale relationships. Unlike Wayland Center, where historic houses sit cheek by jowl with a modern shopping center and a giant like Raytheon hovers over both, Cochituate Center profits from a happy, if unintentional, integration of commercial residential, religious, and municipal buildings.
2. Roads even at the major intersections are relatively narrow, and while contributing to a traffic problem, help to unify the area, and keep the automobile from completely tyrannizing the shopping area.
3. Mature plantings; trees and flowering shrubs have been allowed to expand to soften contours of commercial and residential structures which adds visual interest and continuity to, perhaps, otherwise undistinguished buildings.
4. The churches and their adjacent buildings are a major part of the Main Street strip. By being sited relatively close to the road and to their neighbors, they reflect being part of the community, rather than an austere element above it.
5. The major portion of Wayland's sidewalks are in this area, and the Sidewalk Committee's recent approval for the construction of links to join up areas to create a major sidewalk/footpath system is commendable. Children can safely be encouraged to walk and bicycle to local areas, thus eliminating some of the "parent as chauffeur" syndrome, in turn alleviating some traffic congestion.

PROBLEMS

1. A better traffic control at the junction of East and West Plain Streets and Main Street. This is a difficult intersection and its proximity to a large playground makes better traffic control essential.
2. Parking has been cited by the community as a problem.

3. Several commercial enterprises have erected signs that are tenuosly suitable for the scale of the Center.
4. The fire-station/library building, town owned and of fairly recent vintage, unfortunately adds no architectural interest, and is, in fact, quite unattractive.

RECOMMENDATIONS

1. Future commercial growth should be limited to services that respond to community needs; i.e. laundramats, hardware stores etc. Commercial enterprises that are peripheral and make a negative visual impact, i.e. fast-food franchises, more gas stations, should be discouraged.
2. A sidewalk/footpath link from Wayland Center to Cochituate Center should be constructed to encourage more inter-action between the two areas.
3. The small park adjacent to the fire station/library building is a major asset and should be an incentive to the town to upgrade the visual quality of the town-owned building. The park would profit by well-planned seating areas and other amenities.

BIBLIOGRAPHY

Downes, Charles. Planning for Wayland, 1962.
Harris, James L. General Plan for the Town of Wayland, Mass., 1960.
Jorgensen, Neil. A Guide to New England's Landscape. Barre, Mass. 1971.
Kulmala, Katharine A. with T.P.S.G. Inc. Cluster Zoning in Massachusetts.
Rahenkamp, "Rezoning for the P.U.D.", House & Home, February, 1971.
Smith, Wilbur and Associates. Traffic Improvement Plan for Wayland Center.
Wayland. Conservation Commission. Conservation Plan and Report, 1966.
Wayland. Conservation Commission. Outdoor Education Committee. Trails.
Wayland. League of Women Voters. Wayland, A Community Handbook. Rev. ed., 1968.
Wayland. Planning Board. Subdivision Regulations.
Wayland. Town of. Annual Report. 1972.
Wayland. Town of. A Self Study of a Growing Community.
Wayland. Town of. Report of the Capital Planning Committee.
Wayland. Town of. Soils and Their Interpretation.
Wayland. Town of. Zoning By-laws.
Whyte, William H. The Last Landscape. Garden City, 1968.
U.S. Soils Conservation Service. Study. 1923 and 1965.

VISUAL MATERIAL

Wayland. Planning Board. Land Use Inventory, 1958.
Wayland. Planning Board. Present and Potential Development, 1958.
Wayland. Planning Board. Elevation and Wetland, 1958.
Wayland. Town of. Aerial Photograph, 1970.
Wayland. Town of. Map of Town Owned Land.
U.S. Geological Survey Map.
Lincoln. Conservation Map.
Sudbury. Conservation Map.
Weston. Conservation Map.